Population survey of the little known population of the threatened Hinde’s Babbler
(*Turdoides hindei*) in Kitui, Kenya

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Summary
We surveyed the range-restricted and endemic Hinde’s Babbler in a little known area of its range in Kitui between 3/9/10/12 to 11/9/12. Last records of the species from the area were from the 1920s. During the survey we recorded 35 individuals of Hinde’s Babbler in 6 groups. We could not record the species at Nziu river where old record exist. However the entire target area for the survey was not covered exhaustively. The presence of 2 juveniles and 8 immature birds implies that the groups had a successful breeding season in the recent past. Threats recorded include encroachment of agricultural activities into riverine scrub cover and we encountered groups of boys hunting birds. Mining activities are yet to start due to politics and agreements on compensation. We recommend another status survey in future especially after the commencement of mining activities. Catching and marking the existing groups would also help track the fate of Hinde’s Babbler groups in future and should be considered.

1.1 Introduction

Hinde’s Babbler is a group territorial, range-restricted species endemic to the region east of central Kenya highlands. It occurs in high densities in areas of intensive agriculture at high altitudes and in relatively low densities in drier sparsely populated areas. Until 1994, Hinde’s Babbler was little known and even assumed extinct or a hybrid of two sympatric babbler species. Surveys at the time corrected these assumptions and even led to the status of the species being downgraded from endangered to vulnerable in 2000. The species occurs in 5 known fragmented populations within a range of about 1900 km2 (Fig 1). The species metapopulation includes i) Meru population to north centred around Meru National Park, ii) the Embu population on the slopes of Mt Kenya and extending to Mwea National Reserve to the west and to Mukurweini and Muranga regions in the east, iii) Thika population centred around Ol donyo Sabuk National Park, iv) Machakos population to the south and v) Kitui population to the east. All of these populations except the Kitui population have been recently surveyed and their population sizes, densities, and in some cases even breeding performance estimated. Surveys of the species in 2000-2001 at six sites in Meru, Embu and Machakos estimated a total population of between 700 and 5600 individuals. A repeat survey during 2011, at three of the six sites –Mukurwe-ini, Kianyaga and Machakos- produced mixed results. Whereas the number of groups and individuals had increased at Kianyaga, they decreased severely at Machakos, while at Mukurwe-ini groups decreased and individuals marginally increased. There was a decrease everywhere in the proportion of young
birds in the groups. The Kitui population is known from early records dating back to the 1930’s (Plumb 1979) and also during 2000-2001 surveys. Shaw et al (2003) indicated that the species does not occur beyond Kitui but there have been two recent sightings around Mui Hills (Mulwa et al 2007) and the area north of Mwingi town reported by members of Ornithology section (NMK) who hail from the region. Major threat to the species remains availability of suitable stable habitat patches for breeding and cover. Unpredictable climatic conditions with frequent prolonged droughts may be the main threat in Kitui but this is now likely to be exacerbated by the recent discovery of over 400 million tonnes of coal in the area. A large part of Kitui district (about 500km2), the area now referred to as Mui Basin, is now earmarked for coal mining and possible rapid industrial development. This will likely bring further threats to this population through changes in the stability of suitable habitat. We know from previous studies that the species is sensitive to habitat changes e.g. a modest increase in thicket cover leads to increase in density and breeding performance. The overall goal of this project is therefore to make a rapid assessment of the state of the population in Kitui (with special reference to the Mui Basin area) and provide baseline information that may be required for future conservation action.
Figure 1.0: Map of the study area showing the 5 known populations of the Hinde’s Babbler. The Mui Basin area in Kitui earmarked for coal mining is shown with a question mark. Our population surveys concentrated on the river valleys between Mui hills, Nuu hills and Mwingi town.
1.2 Objectives

i) Assess the densities and population densities of the previously unsurveyed Kitui population of Hinde’s Babbler with focus on the Mui Basin

ii) Assess breeding performance of the previous breeding season of the Kitui population of Hinde’s Babbler, by obtaining the proportion of adults, juveniles and fledglings in each group encountered

iii) Assess the nature and extent of probable threats to the species in Kitui

1.3 Methods

This survey was conducted over 9 days from 3/9/10/12 to 11/9/12Our survey method followed those used by Shaw et al 2001 & 2002 and Njoroge and Bennun (2000) to estimate densities. We followed the course of preselected rivers and played playbacks every 250 m for 2 minutes. Each site was marked with a GPS. For each group sited we recorded total number of individuals in group and group composition (number of adults, juveniles and immatures). We also assessed the habitat characteristics including threats (if any) for each group sited. One group at Nzambani was also trapped using mist nets to familiarize the survey team members with eye colour for aging Hindes Babblers (see Figure 3.0)

1.4 Results

1.4.1 Population Density and Distribution

The survey covered an area of about 2100Km$^2$ in 9 days. We encountered 6 groups of Hinde’s Babbler with a total of 35 individuals during the survey. We found 2 groups along Nzamba River, 1 group each along Ikoo River and Thua River and 2 group each at Kwa Ngie (Table 1.0).

Hinde’s Babblers were recorded at only 6 out of the 28 sites where we used playback (Figure 2.0). There were no Hinde’s Babblers at Nziu River where there are old historical records. The distribution is as shown in Figure 2.0 Obviously a huge part of the area was not covered.
Figure 2.0 Map showing the area surveyed with points where Hindes Babblers responded to playback (kitui_with_HB) and areas where there were no responses to playbacks (kitui_without_HB)
1.4.2 Group Sizes and Composition

Group sizes ranged from 4 to 8 individuals (Table 1.0), with an overall total of 35 individuals recorded. Mean group size was 6 individuals per group. About 70% (24) of the total number of individuals were adults, 23% (8) immature and 6% (2) juveniles.

Table 1.0. Details of the Hinde’s Babbler Groups seen during the survey

<table>
<thead>
<tr>
<th>Date</th>
<th>Site</th>
<th>Coordinates</th>
<th>Group #</th>
<th>Size</th>
<th>Adult</th>
<th>Immature</th>
<th>Juvenile</th>
</tr>
</thead>
<tbody>
<tr>
<td>03/09/2012</td>
<td>Nzamba River (01)</td>
<td>S 01°10’38.0 E 038°09’35.1</td>
<td>1</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>04/09/2012</td>
<td>Nzamba River (02)</td>
<td>S 01°10’33.4 E 038°09’23.0</td>
<td>2</td>
<td>5</td>
<td>4</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>05/09/2012</td>
<td>Ikoo River (01)</td>
<td>S 01°10’28.4 E 038°09’33.2</td>
<td>3</td>
<td>8</td>
<td>6</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>06/09/2012</td>
<td></td>
<td>S 01°10’45.8 E 038°09’56.3</td>
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<td>3</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>07/09/2012</td>
<td>Kwa Ngie</td>
<td>S 01°10’36.8 E 038.10’27.9</td>
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<td>6</td>
<td>3</td>
<td>3</td>
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<tr>
<td>08/09/2012</td>
<td>Thua River</td>
<td>S 01°25’08.4 E 038°08’47.0</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
**Aging Hinde’s Babblers**

Plumage varies markedly in Hinde’s Babbler of all ages. This in the past led to speculation that the species maybe a hybrid of Northern Pied Babbler and probably Arrow-marked Babber. For aging purposes the best characteristic to use is the eye-colour. Juveniles have a dark brown eye colour which turns into a pale orange in immature and bright orange/red in adults (Figure 3.0) This characteristics are easily observable in the field.

![Figure 3.0](image)

**Figure 3.0.** Differences between the eye colour of different ages of Hinde’s Babbler. Juvenile (left), Immature (center) and Adult (right).

### 1.3.3. Threats

During the Survey several threats were identified. Marked expansion of agricultural activities in river valleys was observed. Hinde’s Babbler preferred habitat of scrub cover has been cleared in most areas for agriculture. Mining operations for coal had not started at the time of the survey, though many people had been registered for compensation and resettlement. The other significant threat to babblers we encountered were groups of young boys hunting birds and other wildlife. Mousebirds and Hinde’s Babblers are there favourite and are caught easily due to their slow and lazy flights. It is notable that other favaourites that were abundant in past such as Helmeted Guineafowls are now extirpated.
1.5 Discussion and Conclusions
There were concerns over a perceived decline of the global range of the Hinde’s Babbler. The area surveyed in Kitui lies at the extreme edge of the species range and it was feared they may not occur there anymore. This survey had shown that the species still occurs in this part of its range. However we were unable to find the species at Nziu river where historical records report its presence. The numbers recorded during this survey are similar to the numbers recorded at Machakos suggesting similar densities for the drier areas as compared to the wetter parts of the species range.
Based on the number of juveniles recorded, it appears the species had a successful breeding season in 2012. Elsewhere successful breeding season has been positively correlated with the amount of scrub cover present (Shaw et al 2012). This was clear in this survey, where areas with no scrub cover had no babblers.

Mining activities are yet to start and therefore the threat from clearance of scrub cover by miners has been staved off for now. As shown in previous studies Hinde’s Babbler are sensitive to scrub cover and groups do disappear once their scrub cover disappears. This appears to be the case in the area surveyed, with expansion of agricultural activities (main crop being maize) into previously untouched river valleys. The threat from hunting by young boys is a real one considering the extirpation of Guineafowls and small mammals (Dikdiks) for the area.

We recommend another status survey in future especially after the commencement of mining activities. Catching and marking the existing groups would also help track the fate Hinde’s Babbler groups in future and should be considered.

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References


